

# MINUTE ITEM

This Calendar Item No. 31  
was approved as Minute Item  
No. 31 by the State Lands  
Commission by a vote of 3-0  
to 0 at its 8/31/78  
meeting.

## MINUTE ITEM

8/78  
Chatfield

### 31. REFORESTATION: APPROVAL OF FINAL EIR AND COMMENCEMENT OF SITE PREPARATION WORK - W 21621, W 9301

During consideration of Calendar Item 31, attached, Mr. James F. Trout, Chief, Division of Land Management and Conservation, advised that staff had received only three bids. Because so few bids were received, they contacted the Department of General Services who advised that under these circumstances, staff could negotiate directly with other contractors without advertising. Therefore, Mr. Trout recommended the resolution be amended authorizing staff to contract directly, without advertising, for the proposed work.

Commission-Alternate Betty Jo Smith asked if the Department of General Services had approved the staff's advertising procedure. Mr. Trout assured her it had.

Upon motion duly made and carried, the following amended resolution was approved by the Commission by a vote of 3-0:

#### THE COMMISSION:

1. DETERMINED THAT A FINAL EIR HAS BEEN PREPARED FOR THIS PROJECT BY THE COMMISSION, FOLLOWING EVALUATION OF COMMENTS AND CONSULTATION WITH PUBLIC AGENCIES WHICH WILL ISSUE APPROVALS FOR THE PROJECT.
2. CERTIFIED THAT THE FINAL EIR #ND 221 HAS BEEN COMPLETED IN COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT OF 1970, AS AMENDED, AND THE STATE EIR GUIDELINES, AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.
3. DETERMINED THAT THE PROJECT WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.
4. FOUND THAT ADEQUATE PROVISIONS WILL BE MADE FOR THE PERMANENT PROTECTION OF THE SIGNIFICANT ENVIRONMENTAL CHARACTERISTICS IDENTIFIED PURSUANT TO SECTION 6370.1, OF THE PUBLIC RESOURCES CODE.
5. DETERMINED THAT PORTIONS OF THE REFORESTATION PROJECT THAT ARE LOCATED IN THE COASTAL ZONE ARE CONSISTENT WITH THE PROVISIONS OF ARTICLE 6.5 OF TITLE 2, OF THE CAL. ADM. CODE.

MINUTE ITEM NO. 31. (CONTD)

6. AUTHORIZED THE COMMENCEMENT OF SITE PREPARATION, PLANTING AND OTHER MEASURES RELATED TO THE PROJECT FOR FISCAL YEAR 1978-1979.
7. AUTHORIZED THE STAFF TO AWARD CONTRACTS FOR SITE PREPARATION TO LOWEST QUALIFIED BIDDERS SELECTED BY THE STAFF FOLLOWING THE BID OPENING ON AUGUST 28, 1978.
8. AUTHORIZED THE STAFF TO CONTRACT DIRECTLY, WITHOUT ADVERTISING, FOR MECHANICAL SITE CLEARANCE WORK AS NECESSARY ON THE PARCELS NOT RECEIVING BIDS IN THE BID OPENING HELD ON AUGUST 28, 1978.
9. AUTHORIZED THE STAFF TO CONTRACT DIRECTLY, WITHOUT ADVERTISING, FOR ADDITIONAL MECHANICAL SITE CLEARANCE WORK, IF SUCH WORK IS FOUND NECESSARY ON UP TO TEN (10) ADDITIONAL SITES, NO ONE OF WHICH WILL EXCEED 100 ACRES OF ACTUAL WORK, ON PARCELS NOT INCLUDED IN THE PROPOSAL WHICH WAS THE SUBJECT OF BID OPENING OF AUGUST 28, 1978.
10. APPROVED THE DELEGATION OF AUTHORITY TO THE ASSISTANT CHIEF, DIVISION OF LAND MANAGEMENT AND CONSERVATION TO ACT IN THE CAPACITY OF PROJECT FORESTER AND TO TAKE SUCH OTHER MEASURES AS MAY BE NECESSARY IN FURTHERANCE OF SAID PROJECT.

Attachment: Calendar Item 31 (76 pages)

CALENDAR ITEM

31.

8/78  
W 21621  
W 9301  
Chatfield

REFORESTATION: APPROVAL OF FINAL EIR AND  
COMMENCEMENT OF SITE PREPARATION WORK

BACKGROUND:

The Commission authorized the execution of interagency agreements with Employment Development Department (EDD), California Department of Forestry (CDF) and California Conservation Corps (CCC) for project funding, supervision and implementation; execution of access and road maintenance agreements; commencement of bid procedures for site preparation contracts; and all other measures except commencing of actual work at the June 22, 1978 meeting (Minute Item #12).

ENVIRONMENTAL DOCUMENTATION:

A draft EIR for the Commission's Watershed and Forest Rehabilitation Project was prepared by staff and circulated pursuant to CEQA and the State EIR guidelines. The environmental document for this project is a general, program-oriented EIR covering the entire reforestation effort. As such it is not site-specific, but deals with impacts on a general basis. The document details the types of environmental impacts that are associated with such projects and lists appropriate mitigation measures that may be necessary for candidate parcels.

The selection of candidate parcels as well as the actual prescriptions for each site will be determined by a team approach using the environmental document as a guide. The team consists of members of the Departments of Forestry and Fish and Game, the California Conservation Corps and Commission staff.

The draft EIR was circulated widely but received few comments. The majority of the comments received concerned the use of herbicides for both site preparation

CALENDAR ITEM NO. 31. (CONTD)

and subsequent conifer release. Two commonly used herbicides, 2,4,5-T and 2,4-D were discussed in the document. The EPA is currently studying the registration of 2,4,5-T and until such study is complete, it will not be used for this project. 2,4-D remains an alternative for the remainder of the project but will not be used during the first year. If herbicides are used on candidate parcels it may be necessary to supplement the EIR on site-specific bases. Some counties have expressed concern (or actual objection) over the use of herbicides and such concern or objection will be addressed prior to use of herbicides.

Some of the candidate parcels or portions thereof contain significant environmental values under P.R.C. 6370 et seq. One candidate parcel near Santa Cruz, was obtained by the Commission in an exchange and is currently under study for significant environmental values under PRC 6219. Representatives from the staff and the California Department of Fish and Game have been on this site and have found that portions of the total property contain significant environmental values. Staff has not yet concluded its study of the entire parcel but has concluded that the small area to be reforested will not be detrimentally impacted by such reforestation effort and that adequate mitigation measures will be implemented.

Staff will report back to the Commission at the conclusion of its study of the Santa Cruz parcel with recommendations for classification of the parcel under P.R.C. 6370.1 et seq;

Those remaining parcels that contain significant environmental values will be reviewed by the team for appropriate prescriptions in order to ensure that adequate provisions are made for the permanent protection of those identified values.



CALENDAR ITEM NO. 31. (CONTD)

A final EIR for the project was circulated in accordance with existing guidelines. Staff is recommending approval and certification of Final EIR # ND 221 attached hereto.

IMPLEMENTATION: A prospectus has been prepared and potential bidders have been notified directly, through advertising in local and general circulation newspapers, and through notice being given to various builder's exchanges. The advertising procedure is set forth in detail in Exhibit B. The bid opening for the first parcels to be cleared was conducted August 28, 1978.

The staff is requesting the Commission authorize the staff to award contracts for the various parcels advertised, to the lowest qualified bidders, with such authority to be effective as of the date of the Commission meeting (August 31, 1978).

The staff anticipates that additional parcels will be selected for Spring 1979 plantings which will require site preparation this fall, prior to winter weather, and request that the staff be authorized to directly solicit bids on said parcels, if any, without going through the time-consuming advertising procedure. Actual work on additional parcels to the selected, if any, would not exceed 100 acres in size. The number of additional sites will not exceed ten. Without this authorization the alternatives are either (1) contract with CCC for relatively expensive hand clearance or (2) deleting the site for this fiscal year which without approval for extension of funds would mean deleting the selected planting indefinitely.

EXHIBIT: A. Final EIR. B. Advertising Procedure.

IT IS RECOMMENDED THAT THE COMMISSION:

1. DETERMINE THAT A FINAL EIR HAS BEEN PREPARED FOR THIS PROJECT BY THE COMMISSION, FOLLOWING EVALUATION OF COMMENTS AND CONSULTATION WITH PUBLIC AGENCIES WHICH WILL ISSUE APPROVALS FOR THE PROJECT.

CALENDAR ITEM NO. 31. (CONTD)

2. CERTIFY THAT THE FINAL EIR #ND 221 HAS BEEN COMPLETED IN COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT OF 1970, AS AMENDED, AND THE STATE EIR GUIDELINES, AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.
3. DETERMINE THAT THE PROJECT WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.
4. FIND THAT ADEQUATE PROVISIONS WILL BE MADE FOR THE PERMANENT PROTECTION OF THE SIGNIFICANT ENVIRONMENTAL CHARACTERISTICS IDENTIFIED PURSUANT TO SECTION 6370.1, OF THE PUBLIC RESOURCES CODE.
5. DETERMINE THAT PORTIONS OF THE REFORESTATION PROJECT THAT ARE LOCATED IN THE COASTAL ZONE ARE CONSISTENT WITH THE PROVISIONS OF ARTICLE 6.5 OF TITLE 2, OF THE CAL. ADM. CODE.
6. AUTHORIZE THE COMMENCEMENT OF SITE PREPARATION, PLANTING AND OTHER MEASURES RELATED TO THE PROJECT FOR FISCAL YEAR 1978-1979.
7. AUTHORIZE THE STAFF TO AWARD CONTRACTS FOR SITE PREPARATION TO LOWEST QUALIFIED BIDDERS SELECTED BY THE STAFF FOLLOWING THE BID OPENING ON AUGUST 28, 1978.
8. AUTHORIZE THE STAFF TO CONTRACT DIRECTLY, WITHOUT ADVERTISING, FOR ADDITIONAL MECHANICAL SITE CLEARANCE WORK, IF SUCH WORK IS FOUND NECESSARY ON UP TO (10) ADDITIONAL SITES, NO ONE OF WHICH WILL EXCEED 100 ACRES OF ACTUAL WORK, ON PARCELS NOT INCLUDED IN THE PROPOSAL WHICH WAS THE SUBJECT OF BID OPENING OF AUGUST 28, 1978.
9. APPROVE THE DELEGATION OF AUTHORITY TO THE ASSISTANT CHIEF, DIVISION OF LAND MANAGEMENT AND CONSERVATION TO ACT IN THE CAPACITY OF PROJECT FORESTER AND TO TAKE SUCH OTHER MEASURES AS MAY BE NECESSARY IN FURTHERANCE OF SAID PROJECT.

EXHIBIT "A"

FINAL

ENVIRONMENTAL IMPACT REPORT

WATERSHED AND FOREST REHABILITATION PROJECT

PREPARED BY

STATE LANDS COMMISSION

JUNE 1978

# TABLE OF CONTENTS

	PAGE
I. PROJECT DESCRIPTION	1
A. INTRODUCTION	1
B. LOCATION	2
C. LAND SELECTION	2
D. GOALS	4
E. METHODS	6
F. SCHEDULE	6
G. MANAGEMENT	6
II. ALTERNATIVES	8
A. PROJECT	8
B. NO PROJECT	9
III. LEGAL, INSTITUTIONAL CONSTRAINTS	
IV. ENVIRONMENTAL CONSIDERATIONS	11
A. WATER	11
HYDROLOGY	13
QUALITY	14
MITIGATION MEASURES	15
B. SOILS	15
EROSION AND MASS MOVEMENTS	17
MITIGATION MEASURES	18
SOIL MICROORGANISMS AND SOIL FERTILITY	20
MITIGATION MEASURES	21
C. AIR	21
HERBICIDE APPLICATION	21
BURNING	22
HEAVY EQUIPMENT OPERATIONS	22
SITE CLEARING	22
MITIGATION MEASURES	23
D. VEGETATION	24
HERBICIDE	24
MITIGATION MEASURES	25
BURNING	

	PAGE
MITIGATION MEASURES	25
MECHANICAL SITE PREPARATION	25
MITIGATION MEASURES	25
E. WILDLIFE	26
MITIGATION MEASURES	27
F. FISH RESOURCES	27
G. ENDANGERED SPECIES	29
FLORA	30
FAUNA	30
H. PUBLIC HEALTH	30
HERBICIDES	31
BURNING	31
MITIGATION MEASURES	32
I. ECONOMICS	33
J. RECREATION AND PUBLIC ACCESS	34
K. ESTHETICS	35
L. ENERGY	36
M. GROWTH CONSIDERATIONS	36
N. CULTURAL RESOURCES	37
V. ADVERSE IMPACTS WHICH CANNOT BE MITIGATED	39
VI. BIBLIOGRAPHY	44
VII. APPENDICES	45
A. REGULATIONS OF THE AIR RESOURCES BOARD - FOREST MANAGEMENT BURNING	46
B. REGULATIONS FROM THE CALIFORNIA ADMINISTRATIVE CODE - HERBICIDES	50
C. FOREST PRACTICE RULES	62
VIII. COMMENTS AND RESPONSES	



## I. PROJECT DESCRIPTION

### A. INTRODUCTION

The project will replant formerly forested areas, and plant areas not recently forested, but which are capable of supporting species native to those areas. The purpose is to return brushy or otherwise underproductive land to optimum production of forage, cover for wildlife, commercially usable species, and watershed rehabilitation. Up to 5000+ acres are presently contemplated for such work at a total estimated cost of \$1,462,384 spread over 42 months (project period determined by "planting seasons"). The first 18 months, through the end of fiscal 1978-79, has been approved by the Legislature at \$500,172.

The project is labor-intensive: over \$500,000 (over the 42 month project) is included for the use of California Conservation Corps (CCC) people in planting and selected stand improvement and site preparation and nursery work, and the rest is divided between salaries for new positions in California Department of Forestry (CDF) and State Lands Commission (coordination, supervision and expertise), and contracts for mechanical site preparation. The project will be in rural north-state counties, and will provide public services (enhancement of resources) that would only slowly and incrementally be provided otherwise. Prudent land management dictates continuous watershed and forest rehabilitation. However, lack of funding and staff has restricted these activities.

### B. LOCATION

The parcels selected for reforestation are located on the unsold remnants of State school lands. The school lands are in parcels up to 640 acres in size, and are scattered throughout the more remote parts of the State. Most are multiples of 40 acres, remnants of Sections 16 and 36, although some are in other sections received from the Federal government in lieu of the usual sections. For clarity these too, are included in the designation of school lands.

The school lands are generally remote, without defined access to a public road, and are in many cases within national forests, Bureau of Land Management holdings, National Parks, military reservations or designated wilderness or roadless areas. Those holdings which lie within National Parks, military reservations or wilderness areas, are not being considered for this project.

The parcels which will be the subject of this reforestation project are located mainly in the northern section of the State. The size of each parcel ranges between 7 and 640 acres, with most being much less than a full section. Of the 5,000+ acres to be included in this project, approximately 3/5's (3,000+ acres) are to be actually cleared and planted to conifers. The remaining 2/5's will be left undisturbed due to poor site conditions or sensitive environmental considerations.

The parcels are in general, surrounded by large tracts of undeveloped land. Many of the parcels have supported timber in the past, but have been burned or logged and have not as yet been reforested. Brush has invaded the sites to varying degrees and much of the site preparation work will involve its removal.

#### C. LAND SELECTION

The Commission has parcels totalling about 33,000 acres which the staff estimates contains some land capable of growing commercial species.

Since establishment of commercial timber is the core of the project, no parcels will be selected for planting which lack site conditions for at least some such establishment. On the other hand, since all parcels are producing a mixed flow of environmental benefits already, no parcels will be selected where reforestation will result in a significant long term reduction of benefits.

#### D. GOALS

##### 1. Primary Value

Since wood production is an income producing benefit which can repay management expenses directly, this will be the primary objective of this project. By "wood production" is meant the growth of economic species: pines, firs, cedars, redwood, etc.

The parcels which have already demonstrated that they are capable of producing some timber growth have been selected as candidates for detailed study and possible inclusion in this project.

## 2. Integration of Other Values

Each selected parcel is presently producing a mix of benefits unique to it. In each case the team will assess this mix, evaluate the site's potential for producing these (and other) benefits, and prepare a plan to both increase the sites timber production and sustain or enhance production of the existing mix.

For example:

Wildlife - Deer migration routes with their attendant browse species will in most cases be avoided except to plant small patches as cover "cases". Individual parcels may have natural community elements and processes of a relatively critical nature which should not be disturbed. The process on each parcel will be to evaluate these needs and design a unique program to accommodate them.

Vegetation - The stand created by a successful planting operation will initially be an even-aged stand. However, gaps will occur in the stand at all stages during this time, creating openings which will fill up either by plantings or by natural processes, gradually changing its character toward an uneven-aged stand. Similarly, the areas planted will not in most cases occupy all of the parcel; the planting will be done on areas most suitable to timber production, with other areas left to benefit wildlife, retain snowpacks, inhibit erosion and protect streams.

On suitable sites, experimental plantings of a non-traditional type will be explored. Hardwoods and wildlife forage species in particular will be evaluated for placement in an appropriate environmental "niche" where feasible.

Fish and Surface Streams - Surface water flows affect water or fishery resources, and an undisturbed buffer zone around streams will be left, and enhanced where feasible. Obstacles to fish passage will be corrected or mitigated where possible as part of the project.

Soil Effects - Since a successful reforestation project requires the existing brush be cleared prior to planting to insure optimum seedling survival and growth, to erosive forces for a period of time. However, the uses of hand clearing methods or a tomahawk (brush clearing machine which clips and grinds the brush into a ground covering mulch) will be used where ever possible. Steeper slopes can be avoided; buffer strips around streams can be left undisturbed; clearing, piling and terracing can be done to trap both surface flows and their suspended sediment.

## E. METHODS

A variety of site clearing methods will be considered for this project. Methods to be utilized are; hand grubbing and scalping, mechanical site clearing, herbicides, or burning, used alone or in various combinations.

Hand Grubbing and Scalping will mean clearing a space for each tree planting. Brush will be removed, surface litter cleared and grass will be scalped and removed. This method will be utilized on areas too small to economically justify moving in heavy equipment, areas of steep slope or unstable soils or under sensitive environmental conditions.

Mechanical Site Preparation may involve the use of tomahawks, bulldozers and/or crawler tractors equipped with toothed brush blades (bushrakes) to uproot woody vegetation and pile it in windrows which may be burned.

No mechanical site preparation will be done on slopes over 30% or where environmental conditions indicate it to be undesirable. Environmental conditions which would preclude the use of mechanical site clearing methods include; unstable soils, or soils with high erosion hazard and particularly sensitive wildlife considerations.

Herbicides: The use of herbicides for brush suppression and conifer release will be an option for this project. Many parcels will not require the use of herbicides, but those areas which are too steep for mechanical clearing methods and too large for hand clearing will be treated with herbicides. Two herbicides, 2,4-D and 2,4,5-T have been considered for use. 2,4-D is a broad spectrum herbicide which is used to eliminate undesirable brush prior to planting. 2,4,5-T is a relatively narrow-range herbicide which is used mixed with 2,4-D for subsequent conifer release. A typical spray program would normally involve the use of a mixture of 2,4,5-T and 2,4-D for initial brush suppression, tree planting, then a follow up application of 2,4,5-T within 2 years to eliminate emergent brush competition.

The use of herbicides for control of brush and weeds in the national forests has become the subject of increasing controversy, especially with regard to the use of 2,4,5-T. Dioxin is a by-product of the manufacturing process of 2,4,5-T and is extremely toxic. In the past, the amount of dioxin present in 2,4,5-T was as high as 40 ppm. Since 1971, changes in the manufacturing process have reduced the level of dioxin to the .1 ppm now required by law.



Considerable research has been done on the effects of 2,4,5-T and dioxin and the scientific community is divided between those who advocate a total ban on the use of 2,4,5-T and those who feel that at the usual rate of application, 2 to 3 lbs. A.E. per acre (Acid Equivalent), the risks are inconsequential.

EPA is now reviewing the effects of 2,4,5-T and dioxin to determine if registration should be withdrawn. The EPA review is expected to take about a year, after which the herbicide will either be given continuing registration, further restrictions on its use, or the registration will be withdrawn.

In view of the considerable differences of opinion regarding the safety of this substance and its persistence in the food chain, the use of 2,4,5-T will be suspended on this project until after EPA completes its review and reaches a decision regarding continuing registration. If 2,4,5-T is found to be nonpersistent and the hazard to human within acceptable limits, then it will be considered for use on this project for brush suppression and subsequent conifer release. A supplement to this EIR will be prepared on the use of 2,4,5-T and circulated through the State clearing-house prior to use on this project. If the registration of 2,4,5-T is withdrawn, or substantial evidence as to its hazards as applied in forestry projects is presented, then it will not be used in this project.

2,4-D is one of the most commonly used herbicides in forestry for the control of competing vegetation, and has been in use for over 30 years. It is applied either by hand on the ground, or by air. 2,4-D is used alone or in a combination with other herbicides such as 2,4,5-T, Dicamba, Amitrole, etc. For this year of the project, 2,4-D will be used alone, and applied by air.

When used as an aeri ally applied spray, 2,4-D is usually applied at the rate of 2 to 3 lbs. AE (acid equivalent) per acre for site preparation. The herbicide is diluted and suspended in oil, water, or oil in water emulsions. The most effective method of covering a site is to apply 10 gallons of carrier (containing the 2 to 3 lbs AE of 2,4-D) in a crisscross or double flying pattern (USDA 1978).

2,4-D will be used in the 1978-79 season for initial brush eradication on the steeper slopes where mechanical site work is not feasible. Appropriate sites will be sprayed with 2,4-D, from the air by licensed contractors. The brush will be left standing or be disposed of by broadcast burning.



Spraying with 2,4-D will take place in the fall and burning under the supervisions of CDF, or the local office of the U. S. Forest Service (USFS), would follow when the brush is thoroughly dessicated and atmospheric conditions permit.

#### Burning

When dead brush is to be removed, two burning methods will be used.

Broadcast burning is used on areas of steep slopes or unstable soils where the use of heavy equipment may not be appropriate. The brush is sprayed with 2,4-D and then burned in place after it is thoroughly dried.

Where the use of heavy equipment is feasible and economically warranted, the brush will be either chipped and left in place as a soil protecting mulch or piled in windrows and burned. In areas of unstable soils, the brush will be piled in windrows perpendicular to the slope and left unburned. The windrow will then trap any sediment moving down slope and reduce erosion and stream sedimentation.

#### F. SCHEDULE

The project has been designed to be carried out in 3 phases over the 3 year period 1978-1981, with approximately 1/3 of the acreage treated each year.

Project preparation has already begun, with site selection for the first year's planting, training of CCC crews and meetings to coordinate the project. Site preparation for the 1979 spring planting season will be carried out this summer and fall. Concurrently with site preparation and planting activities each year, sites will be selected and evaluated for the following year.

#### G. MANAGEMENT

Organization and staff: SLC will control the project and select the candidate planting sites. The California Department of Forestry (CDF) will provide expertise, criteria for and supervision of reforestation site preparation and planting, evaluation of watershed rehabilitation potential, facilities and supervision for production of seedlings and training in the finer points of reforestation for CCC crews.

The California Conservation Corps (CCC) will provide labor and supervision of the work crews. Since the project is labor intensive, many of the site preparation methods will involve hand labor by the CCC crews. All tree planting will also be done by the CCC work crews.

The California Department of Fish and Game (DFG) will provide consultation and advice on protection and enhancement of existing wildlife resources as well as endangered species.

There will undoubtedly be sites requiring preparation by heavy equipment which will need to be contracted out. Specifications, bidding procedure and awarding contracts for such will be done by SLC with CDF, CCC, and DFG advice.

A team composed of representatives from SLC, CDF, CCC and DFG will visit each parcel and evaluate the potential for timber production, wildlife enhancement and/or experimental planting of other than commercial timber species. The final program for each site will be jointly developed, based on recommendations by the various team members, and the constraints of the school land grant.

## II. ALTERNATIVES

Since the grant for this project is for reforestation and employment enhancement, viable alternatives are limited. Other land management goals are possible, but would not qualify for funding under the existing grant.

In realistic terms, the alternatives are; Project and No Project, since the loss of grant funding would mean the termination of the project.

### A. PROJECT

The project itself involves the selection of a unique program for each site from a number of alternatives. The potential for timber production, watershed rehabilitation, and wildlife enhancement on each site will be evaluated along with the limitations imposed by the soils, slope, elevation, etc., which will determine the exact program for each particular site.

### B. NO PROJECT

Instead of utilizing soils adapted to commercial species for production of forest products, an estimated 3,000 acres would remain barren or underproductive. Brush and other non-commercial vegetation would occupy sites capable of producing wood resources that will in all likelihood become increasing valuable in the future. No watershed rehabilitation work would be done.

### III. LEGAL, INSTITUTIONAL CONSTRAINTS

#### Local Governments

Compatibility of site development with land uses of adjacent parcels will be given consideration in recommendations made for site selection. All affected county governments will be informed concerning the program and will be given an opportunity to comment. The State Lands Commission is sensitive to the desires of local planning jurisdictions and their compatibility with this program.

#### California Environmental Quality Act

The draft EIR has been prepared as required by the California Environmental Quality Act. The draft EIR will be circulated through the State Clearinghouse to other State agencies, private organizations, and individuals for comment. We expect valuable information and dialogue to come from this exchange. In the past the major environmental groups have been the largest contributors to the dialogue on the values involved in reforestation projects.

#### Other State Agencies

As explained in the project description section the entire project is the result of coordination between four State agencies; the State Lands Commission, Department of Forestry, California Conservation Corps and the Department of Fish and Game. Each selected parcel will be inspected by a team composed of representatives from each agency, to evaluate its potential for timber production, wildlife protection and enhancement, and/or experimental plantings of other than commercial timber species. Upon completion of the site evaluation, a specific program of reforestation procedures will be chosen and initiated based on recommendations made by team members. A team approach will assure compliance with the requirements of CEQA, Section 6370 of the Public Resources Code (Environmentally Significant Lands), Forest Practices Rules, and regulations of the Air Resources Board and the Department of Agriculture.



#### U. S. Department of the Treasury

The U. S. Department of the Treasury has adopted regulations implementing title II of the Public Works Employment Act of 1976. (Public law 94-369). The grant funds for this project came from this Act and are dispursed to the State Lands Commission through the California Employment Development Department.

#### U. S. Forest Service

The U. S. Forest Service will be consulted in connection with various phases of the project, such as burning operations. If they are an adjacent landowner, the State Lands Commission will consider the compatibility of land uses, and will give the USFS the opportunity to comment on the project.



#### IV. ENVIRONMENTAL CONSIDERATIONS

##### A. Water

##### 1. Hydrology

The hydrologic regime of an area is the result of a complex interaction between climate, topography, vegetation, soils and geology. Making changes in the type and amount of vegetation on a site will inevitably result in changes in the local water cycle. These effects will differ in the duration and significance of impacts.

Since the parcels selected for treatment under this project are typically small in relation to the surrounding underdeveloped areas, any impact, positive or negative, will be relatively insignificant in terms of the entire watershed.

##### Project Impacts

The hydrologic impacts of this project will result primarily from the site preparation activities.

Baring the ground by removal of the layer of brush litter during site preparation, can affect local water yields. The usually thick layer of decaying organic materials which carpets the soil in undisturbed areas, absorbs the impact of falling raindrops and holds the water for absorption by the soil. In most undisturbed areas, especially on deep soils and gentle slopes, there is no overland flow, even during periods of intense rainfall. The cushioning and absorbing ability of the litter generally exceeds the rate of precipitation. Removing this protective layer will result in increased runoff and overland flow once the soil has become thoroughly saturated.

In many instances, a tomahawk brush clearing machine will be used to eliminate soil exposure. The tomahawk clips the brush off at ground level and then grinds it into a mulch which is left in place to protect the soil.

Removing most of the existing brush and grass from a site, will result in a reduction in the rate of evapotranspiration with a consequent increase in water yield. The canopy formed by existing brush intercepts a portion of incoming precipitation, catching it on leaves and stems from which it evaporates back into the atmosphere. Seventy